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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,112	10/19/2001	Jeffrey A. Gariepy	Q01-1037	2878

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EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT	PAPER NUMBER
2652	22

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,112

Applicant(s)

GARIEPY ET AL.

Examiner

William J. Klimowicz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38,47 and 51-92 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38,47,51-56 and 58-92 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 57 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on May 24, 2004 has been entered.

Claims Status

Applicants have voluntarily canceled claims 1-37, 39-46 and 48-50.

Claims 38, 47 and 51-92 are currently pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 54 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following phrase(s) lack clear antecedent basis within the claim(s), i.e., either the particularly recited passage fails to be properly introduced prior to its appearance at that point in the claim or the structure recited in the passage is not an inherent part of or component of the

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previously recited structure:

With regard to claim 54, the phrase "tape receiver" lack positive antecedent basis.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 38, 47, 51-56, 58-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deck et al. (EPO 0 280 263 A2).

As per claims 51, 59, 62, 63, 64, 69, 74, 79, 85 and 89, Deck et al. (EPO 0 280 263 A2) discloses a transport assembly and method of operation thereof, for moving a first cartridge (e.g., 15) and a second cartridge (e.g., another (15)) between a storage rack (13 and/or 14) and a drive (18, 20), the drive including a cartridge receiver (slot S), the transport assembly comprising: a transporter (25) including a first transport receiver (e.g., 42) that receives the first cartridge (e.g., 15) and a second transport receiver (e.g., 43) that receives the second cartridge; a transport mover (e.g., including motor (33) and/or drive unit (80)) that moves the transporter (25) between the storage rack (13/14) and the drive (18,20); and a cartridge mover (including belts (44, 45) and pivotal arms (48)) that moves one of the cartridges (15) between the storage rack (13, 14) and one of the transport receivers (42, 43), the cartridge mover (including belts (44, 45) and pivotal arms (48)) including a gripper assembly (e.g., belt (44, 45)) that grips one of the

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cartridges (via belt teeth), a first gripper mover (e.g., the means for moving the belt in a direction toward/away from slot (S) or racks (14,14)) that moves the gripper assembly along a first axis (e.g. the direction toward/away from slot (S) or racks (13,14)) relative to the transporter (25), and a second gripper mover (e.g., 52) that moves the gripper assembly (e.g., belt (44, 45)) along a second axis (e.g., the direction of pivoting about axis (49) - i.e., the belt at the tip ends of arms (48) are pivoted and moved along a second axis -X -axis) relative to the transporter, the second axis being angled relative to the first axis (e.g., see FIG. 3).

Note as per claim 64 and claims that depend therefrom, and as per claim 74 and claims that depend therefrom, the second axis corresponds to the Z-axis, the first axis corresponds to the Y-axis, and the second axis corresponds to the X-axis of Deck et al. (EPO 0 280 263 A2).

As per claims 52, 70, 71, 80 and 81, wherein the first axis (Y-axis - see FIG. 1) is substantially perpendicular to the second axis (X-axis - see FIG. 1 in conjunction with FIG. 3).

As per claims 53, 63 and 71, wherein the transport mover (e.g., including motor (33) and/or drive unit (80)) moves the transporter along an X axis, along a Y axis and about a Z axis that is substantially perpendicular to the X axis and the Y axis (e.g., see, *inter alia*, COL. 4, lines and COL. 6, line 57 through COL. 7, line 30); that is, all axes X, Y and Z are perpendicular to each other.

As per claims 54, 67 and 77, wherein the transport mover (e.g., including motor (33) and/or drive unit (80)) rotates the transporter (25) between zero degrees and approximately 180 degrees about the Z axis to transport one of the cartridges (15) between one of the receivers (13, 14) and the cartridge receiver (S) - e.g., see COL. 8, lines 19-20.

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As per claims 55, 68 and 78, wherein the transport mover (e.g., including motor (33) and/or drive unit (80)) rotates the transporter (25) at least approximately 90 degrees about the Z axis to transport one of the cartridges between one of the receivers (42, 43) and the cartridge receiver (S).

As per claim 56, further including a guide (e.g., 30, 32) that extends substantially between the storage rack (13, 14) and the media drive (18, 20), the transport mover (e.g., including motor (33) and/or drive unit (80)) moving the transporter (25) between the storage rack and the media drive along the guide (30, 32).

As per claims 58 and 62, Deck et al. (EPO 0 280 263 A2) additionally discloses a storage system (10) including a storage rack (13, 14), a media drive (e.g., 18, 20) and the transport assembly of claim 51 that is positioned near the storage rack (13, 14) and the media drive (18, 20), the storage rack (13, 14) including a plurality of media receivers (slots into which (15) are inserted into racks (13, 14).

As per claims 72 and 83, a storage system (10) is provided with the storage rack (13, 14).

Additionally, with regard to claim 59, Deck et al. (EPO 0 280 263 A2) discloses a method for moving a first cartridge (15) and a second cartridge (15) between a storage rack (13, 14) and a media drive (18, 20), the method comprising the steps of: gripping a first cartridge (15) with a gripper assembly (e.g., belt (44, 45)); moving the gripper assembly (e.g., belt (44, 45)) along a first axis (e.g. the direction toward/away from slot (S) or racks (14,14)) relative to a transporter (25) with a first gripper mover (e.g., the means for moving the belt in a direction toward/away from slot (S) or racks (14,14)) to move the first cartridge (15) into the transporter (25), the transporter (25) being movable relative to the storage rack (13, 14); moving the gripper

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assembly (e.g., belt (44, 45)) along a second axis (e.g., the direction of pivoting about axis (49) - i.e., the belt at the tip ends of arms (48) are pivoted and moved along a second axis) relative to the transporter (25) with a second gripper mover (e.g., 52), the second axis being substantially perpendicular to the first axis; gripping a second cartridge (e.g., another cartridge (15)) with the gripper assembly (e.g., belt (44, 45)); and moving the gripper assembly (e.g., belt (44, 45)) along the first axis relative to the transporter (25) with the first gripper mover to move the second cartridge into the transporter (25).

As per claim 60, further comprising the step of moving the transporter (25) with a transport mover (e.g., including motor (33) and/or drive unit (80)) to transport one of the cartridges (15) to a media drive (18, 20).

As per claim 61, wherein the step of moving the transporter (25) includes moving the transporter (25) along an X axis, along a Y axis and about a Z axis that is substantially perpendicular the X and Y axes - see FIGS. 1 and 3.

As per claims 38 and 47, wherein the first axis (Y-axis) is substantially perpendicular to the second axis (X-axis).

Additionally, as per claim 64, the transport mover rotates the transporter (25) about a second axis (Z-axis as per independent claim 64) that is different than the first axis (Y-axis).

As per claims 65 and 75, wherein the first axis (Y-axis) is substantially perpendicular to the second axis (Z-axis of independent claim 64).

As per claim 66 and 76, wherein at least one of the media receivers (one of 13 and 14) is angled relative to the cartridge receiver (the other of (18) or (20)).

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As per claim 82, wherein the mover transport mover (e.g., including motor (33) and/or drive unit (80)) rotates the transporter (25) and the gripper assembly simultaneously about the second axis (i.e., Z-axis).

As per claims 85 and 89, Deck et al. (EPO 0 280 263 A2) discloses a method for moving one or more cartridges (15) between a storage rack (14, 14) and a media drive (18, 20), the method comprising the steps of: providing a transporter (25) that includes a first transport receiver (42) and a second transport receiver (43), each receiver (42, 43) being adapted to receive one of the cartridges (15); moving one of the cartridges (15) into the transporter (25) with the gripper assembly (e.g., belt (44, 45)); moving the gripper assembly (e.g., belt (44, 45)) along a first axis (a direction toward/away from slot (S) or racks (13,14)) relative to a transporter (25); and rotating the transporter (25) about a second axis (Z-axis) that is different than the first axis with a transport mover (e.g., including motor (33) and/or drive unit (80)).

As per claims 86 and 90, wherein the second axis (Z-axis) is substantially perpendicular to the first axis (a direction toward/away from slot (S) or racks (14,14)).

As per claims 87 and 91, wherein the step of moving the gripper assembly (e.g., belt (44, 45)) includes moving the gripper assembly (e.g., belt (44, 45)) along a third axis (X-axis) relative to the transporter (25), the third axis (X-axis) being substantially perpendicular to the first axis (Y-axis) and the second axis (Z-axis).

As per claims 88 and 92, wherein the step of rotating the transporter (25) includes rotating the transporter at least approximately 90 degrees about the second axis (Z-axis).

Additionally, as per claim 89, moving the gripper assembly (e.g., belt (44, 45)) along the first axis (a direction toward/away from slot (S) or racks (14,14)) relative to a transporter (25);

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and rotating the gripper assembly (e.g., belt (44, 45)) about a second axis (Z-axis) that is different than the first axis with a mover (e.g., 80).

With regard to claims 51, 59, 62, 63, 64 74, 85 and 89, although Deck et al. (EPO 0 280 263 A2) does not expressly show the library and transport assembly as utilizing tape cartridges (single reel magnetic tape as per claim 21), in lieu of optical media in cartridges, Official notice is taken that tape cartridges (single reel magnetic tape) used in libraries inclusive of racks and recording/reproducing media drives are notoriously old and well known in the art, capable of instant demonstration.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the library of Deck et al. (EPO 0 280 263 A2) as utilizing tape in lieu of discs, as is well known in the library storage art.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the library of Deck et al. (EPO 0 280 263 A2) as utilizing tape in lieu of discs, as is well known in the library storage art, since tape and discs are art recognized equivalents (in terms of storage and retrieval of information data on portable storage media) and further it would be advantageous to provide tape media (in lieu of discs) and their associated tape drives, since tape allows for a greater capacity per cartridge, than disc media, as is well known, established and appreciated in the art.

With regard to claims 58, 62, 73 and 84, however, Deck et al. (EPO 0 280 263 A2) does not expressly disclose a transporter sensor, the sensor detecting alignment of the transporter relative to at least one of the media receivers.

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Official notice is taken that transporter sensors used in libraries inclusive of racks and recording/reproducing media drives are notoriously old and well known in the art, capable of instant demonstration.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the library of Deck et al. (EPO 0 280 263 A2) as utilizing a transporter sensor, as is well known in the library storage art.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the library of Deck et al. (EPO 0 280 263 A2) as utilizing a transporter sensor, as is well known in the library storage art, since such sensors allow for the correct location, alignment and desired selection of a particular storage medium element, for transfer and/or recording/reproducing purposes. In fact, a library system without such a conventional transporter sensor would be inoperable, since it would not be known which medium element is being selected, as is well known, established and appreciated in the art.

Allowable Subject Matter

Claim 57 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

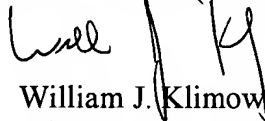
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (703) 305-

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3452. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William J. Klimowicz
Primary Examiner
Art Unit 2652

WJK